

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Currently Amended) A method comprising:
 sending to a remote control, by a controllee electronic apparatus, a first collection of user interface displays having associated control commands, for the remote control to control the controllee electronic apparatus, the first collection of user interface displays having a plurality of display states and associated display state transition rules;
 receiving by the controllee electronic apparatus, first control commands, from said remote control, the first control commands being resulted from said first collection of user interface displays being used by a user of said remote control; and
 controlling operation of said controllee electronic apparatus, by said controllee electronic apparatus in accordance with said received first control commands.
2. (Cancelled)
3. (Previously Presented) The method of claim 1, wherein said sending to a remote control, by a controllee electronic apparatus, comprises sending to the remote control, by the controllee electronic apparatus a first collection of user interface displays having a plurality of display cells.
4. – 8. (Cancelled)
9. (Previously Presented) The method of claim 1, wherein said first control commands comprise control commands for controlling a plurality of operation characteristics of said controllee electronic apparatus, and said plurality of operation characteristics are selected from a group consisting of power on/off, channel selections, audio volume, picture brightness, and picture color.

10. (Previously Presented) The method of claim 1, wherein said method further comprises sending to said remote control, by the controllee electronic apparatus, a second collection of user interface displays for controlling an auxiliary controllee electronic device coupled to said controllee electronic apparatus.

11. (Previously Presented) The method of claim 10, wherein said sending to the remote control, by the controllee electronic apparatus, a second collection of user interface displays for controlling the auxiliary controllee electronic device. comprises sending to the remote control, by the controllee electronic apparatus, said second collection of user interface displays having a plurality of display states and associated display state transition rules.

12. (Previously Presented) The method of claim 10, wherein said sending to the remote control, by the controllee electronic apparatus, a second collection of user interface displays for controlling the auxiliary controllee electronic device, comprises sending to the remote control, by the controllee apparatus, said second collection of user interface displays having a plurality of display cells.

13. (Cancelled)

14. (Previously Presented) The method of claim 10, wherein said method further comprises

receiving by the controllee electronic apparatus, from said auxiliary controllee electronic device, specifications of substantive contents of said second collection of user interface displays; and

generating, by the controllee electronic apparatus, said second collection of user interface displays in accordance with said received specifications.

15. (Previously Presented) The method of claim 14, wherein said receiving of specifications of substantive contents of said second collection of user interface displays, by

said controllee electronic apparatus, comprises receiving by the controllee electronic apparatus, from said auxiliary controllee electronic device, an XML based specification.

16. – 17. (Cancelled)

18. (Previously Presented) The method of claim 10, wherein said method further comprises

receiving, by the controllee electronic apparatus, second control commands from said remote control, the second control commands being resulted from said second collection of user interface displays being used by a user of said remote control; and

controlling operation of said auxiliary controllee electronic device, by said controllee electronic apparatus, in accordance with said received second control commands.

19. (Cancelled)

20. (Previously Presented) The method of claim 18, wherein said controlling of the operation of the auxiliary controllee electronic device, by the controllee electronic apparatus, comprises relaying, by the controllee electronic apparatus, the received second commands to the auxiliary controllee electronic device.

21. – 22. (Cancelled)

23. (Previously Presented) The method of claim 20, wherein said second control commands comprise control commands for controlling a plurality of operation characteristics of said auxiliary controllee electronic device, and said plurality of operation characteristics are selected from a group consisting of power on/off, play, fast forward, reverse, pause, stop, audio volume, picture brightness, and picture color.

24. - 25. (Cancelled)

26. (Previously Presented) A method of operation comprising:
providing sending to a primary controllee electronic device, by an auxiliary controllee electronic device, specifications for a collection of user interface displays having associated control commands for controlling the auxiliary controllee electronic device for the primary controllee electronic device to generate and send the collection of user interface displays having associated control commands to a remote control;
receiving by the auxiliary controllee electronic device, control commands originated from said remote control, the control commands being resulted from said collection of user interface displays having associated control commands being used by a user of said remote control; and
controlling operation of said auxiliary controllee electronic device, by said auxiliary controllee electronic device, in accordance with said received control commands.

27. (Previously Presented) The method of claim 26, wherein said sending to a primary controllee electronic device, by an auxiliary controllee electronic device, specifications for a collection of user interface displays having associated control commands for controlling the auxiliary controllee electronic device comprises, sending to the primary controllee electronic device, by the auxiliary controllee electronic device, specifications for said collection of user interface displays having a plurality of display states and associated display state transition rules.

28. (Previously Presented) The method of claim 26, wherein said sending to a primary controllee electronic device, by an auxiliary controllee electronic device, specifications for a collection of user interface displays having associated control commands, for controlling the auxiliary controllee electronic device comprises, sending specifications for said collection of user interface displays having a plurality of display cells.

29. (Previously Presented) The method of claim 26, wherein said sending to a primary controllee electronic device, by an auxiliary controllee electronic device, specifications for a collection of user interface displays having associated control commands for controlling the auxiliary controllee electronic device comprises, sending to the primary controllee electronic device, by the auxiliary controllee electronic device, an XML based specification, specifying substantive contents of the collection of user interface displays.

30. – 34. (Cancelled)

35. (Currently Amended) The method of claim 2634, wherein said control commands comprise control commands for controlling a plurality of operation characteristics of said auxiliary controllee electronic device, and said plurality of operation characteristics are selected from a group consisting of power on/off, play, fast forward, reverse, pause, stop, audio volume, picture brightness, and picture color.

36. – 37. (Cancelled)

38. (Currently Amended) A method of operation comprising:
receiving by a remote control, from a primary controllee electronic device, a first collection of user interface displays having associated control commands for controlling the primary controllee electronic device, the first collection of user interface displays having a plurality of display states and associated display state transition rules;
facilitating usage of the first collection of user interface displays by a user, by the remote control, to control the primary controllee electronic device; and
sending first control commands to the primary controllee electronic device, by the remote control, to control the primary controllee electronic device, in response to said usage of the first collection of user interface displays.

39. (Cancelled)

40. (Previously Presented) The method of claim 38, wherein said receiving of a first collection of user interface displays having associated control commands for controlling the primary controllee electronic device, by the remote control, from the primary controllee electronic device, comprises receiving by the remote control, from the primary controllee electronic device, said first collection of user interface displays having a plurality of display cells.

41. – 42. (Cancelled)

43. (Previously Presented) The method of claim 38, wherein said first control commands comprise control commands for controlling a plurality of operation characteristics of said primary controllee electronic device, and said plurality of operation characteristics are selected from the group consisting of power on/off, channel selections, audio volume, picture brightness, and picture color.

44. (Previously Presented) The method of claim 38, wherein the method further comprises:

receiving by the remote control, a second collection of user interface displays having associated control commands, from the primary controllee electronic device, for controlling an auxiliary controllee electronic device coupled to the primary controllee electronic device;

facilitating usage of the second collection of user interface displays by the user, by the remote control, to remotely control the auxiliary controllee electronic device; and

sending second control commands, either directly or indirectly, to the auxiliary controllee electronic device, by the remote control, to control the auxiliary controllee electronic device in response to said usage of the second collection of user interface displays.

45. (Previously Presented) The method of claim 44, wherein said receiving by the remote control, from a primary controllee electronic device, of said second collection of user interface displays for controlling the auxiliary controllee electronic device comprises, receiving by the remote control, from the primary controllee electronic device, said second collection of user interface displays having a plurality of display states and associated display state transition rules.

46. (Previously Presented) The method of claim 44, wherein said receiving by the remote control, from a primary controllee electronic device, of said second collection of user interface displays for controlling the auxiliary controllee electronic device comprises, receiving by the remote control, from the primary controllee electronic device, said second collection of user interface displays having a plurality of display cells.

47. – 49. (Cancelled)

50. (Previously Presented) The method of claim 44, wherein said second control commands comprise control commands for controlling a plurality of operation characteristics of said auxiliary controllee electronic device, and said plurality of operation characteristics are selected from a group consisting of power on/off, play, fast forward, reverse, pause, stop, audio volume, picture brightness, and picture color.

51. – 52. (Cancelled)

53. (Currently Amended) A controllee electronic apparatus comprising:
first means to send to a remote control, from the controllee electronic apparatus, a first collection of user interface displays having associated control commands for controlling the controllee electronic apparatus, the first collection of user interface displays having a plurality of display states and associated display state transition rules, and to receive into the controllee apparatus first control

commands from said remote control, the first control commands being resulted from said first collection of user interface displays being used by a user of said remote control; and
second means to control operation of said controllee electronic apparatus in accordance with said received first control commands.

54. – 55. (Cancelled)

56. (Previously Presented) The apparatus of claim 53, wherein the apparatus further comprises a connection interface adapted to provide a connection selected from a group consisting of a wireless optical connection operated in accordance with a wireless optical communication protocol, a wireless electro-magnetic connection operated in accordance with a wireless communication protocol, and a wired electrical connection operated in accordance with a wired communication protocol, and said first means is adapted to send to the remote control, from the controllee electronic apparatus, the first collection of user interface displays through the connection selected from the group.

57. (Previously Presented) The apparatus of claim 56, wherein the apparatus further comprises a connection interface adapted to provide an infrared based optical connection, operated in accordance with an IrDA standard based wireless optical communication protocol, and said first means is adapted to send to the remote control, from the controllee electronic apparatus, the first collection of user interface displays through the infrared based optical connection.

58. (Previously Presented) The apparatus of claim 56, wherein the apparatus further comprises a connection interface adapted to provide a wireless electro-magnetic communication connection, operated in accordance with a selected one of a Bluetooth and an IEEE 802.11 standard based wireless communication protocol, and said first means is adapted to send to the remote control, from the controllee electronic apparatus, the first

collection of user interface displays through the wireless electro-magnetic communication connection.

59. (Previously Presented) The apparatus of claim 56, wherein the apparatus further comprises a connection interface adapted to provide a wired electrical connection selected from a group consisting of a serial connection, a parallel connection, a USB connection, and an IEEE 1394 based connection, operated using a message based communication protocol, and said first means is adapted to send to the remote control, from the controllee electronic apparatus, the first collection of user interface displays through the wired electrical connection.

60. – 61. (Cancelled)

62. (Previously Presented) The apparatus of claim 53, wherein said first means is further adapted to send to said remote control, from the controllee electronic apparatus, a second collection of user interface displays having associated commands for controlling an auxiliary controllee electronic device coupled to said controllee electronic apparatus.

63. – 65. (Cancelled)

66. (Previously Presented) The apparatus of claim 62, further comprising:
third means to receive into the controllee electronic apparatus, from said auxiliary controllee electronic device, specifications of substantive contents of said second collection of user interface displays; and
fourth means to generate within the controllee electronic apparatus said second collection of user interface displays in accordance with said received specifications.

67. (Cancelled)

68. (Previously Presented) The apparatus of claim 66, wherein the apparatus further comprises a connection interface adapted to provide a connection selected from a group consisting of a wireless optical connection operated in accordance with a wireless optical communication protocol, a wireless electro-magnetic connection operated in accordance with a wireless communication protocol, and a wired electrical connection operated in accordance with a wired communication protocol, and said third means is adapted to receive the specifications, into the controllee electronic apparatus, from the auxiliary controllee electronic device, through the connection.

69. (Previously Presented) The apparatus of claim 68, wherein the apparatus further comprises a connection interface adapted to provide a video connection, operated in accordance with a message based communication protocol embedded within a video protocol, and said third means is adapted to receive the specifications, into the controllee electronic apparatus, from the auxiliary controllee electronic device, through the video connection.

70. (Currently Amended) The apparatus of claim ~~66~~62, wherein said first means is further adapted to receive second control commands into the controllee electronic apparatus from said remote control, the second control commands being resulted from said received second collection of user interface displays being used by said user of said remote control; and said second and third means are further adapted to cooperate to control operation of said auxiliary controllee electronic device in accordance with said received second control commands.

71. (Cancelled)

72. (Previously Presented) The apparatus of claim 70, wherein said second and third means are adapted to cooperate to relay the received second commands from the controllee electronic apparatus to the auxiliary controllee electronic device.

73. (Cancelled)

74. (Previously Presented) The apparatus of claim 62, wherein said auxiliary controllee electronic device is a device selected from a group consisting of a videocassette recorder (VCR), a digital versatile disk (DVD) player, a home theatre audio control unit, and a video camera.

75. (Cancelled)

76. (Original) The apparatus of claim 53, wherein said controllee electronic apparatus is a TV.

77. (Previously Presented) The apparatus of claim 53, wherein said controllee electronic apparatus is a device selected from a group consisting of a set top box, a DVD player, and a VCR.

78. (Previously Presented) An auxiliary controllee electronic apparatus comprising:
first means adapted to send from the auxiliary controllee electronic apparatus specifications for a collection of user interface displays having associated control commands for controlling the auxiliary controllee electronic device to a primary controllee electronic device, for the primary controllee electronic device to generate and send the collection of user interface displays to a remote control;
second means adapted to receive control commands originated from said remote control into the auxiliary controllee electronic apparatus, the control commands being resulted from said received collection of user interface displays being used by a user of said remote control; and
third means adapted to control operation of said auxiliary controllee electronic device in accordance with said received control commands.

79. – 81. (Cancelled)

82. (Previously Presented) The apparatus of claim 78, wherein the apparatus further comprises a connection interface adapted to provide a connection selected from a group consisting of a wireless optical connection operated in accordance with a wireless optical communication protocol, a wireless electro-magnetic connection operated in accordance with a wireless communication protocol, and a wired electrical connection operated in accordance with a wired communication protocol, and said first means is adapted to send the specifications of its collection of user interface displays from the auxiliary controllee electronic apparatus, to the primary controllee electronic device through the connection.

83. (Previously Presented) The apparatus of claim 78, wherein the apparatus further comprises a connection interface adapted to provide a video connection, operated in accordance with a message based communication protocol embedded within a video protocol, and said first means is adapted to send the specifications for its collection of user interface displays from the auxiliary controllee electronic apparatus, , to the primary controllee electronic device through the video connection.

84. (Previously Presented) The apparatus of claim 78, wherein said second means is adapted to receive into the auxiliary controllee electronic apparatus, the control commands, directly from the remote control.

85. (Previously Presented) The apparatus of claim 78, wherein said second means is adapted to receive the control commands into the auxiliary controllee electronic apparatus, indirectly, via said primary controllee electronic device.

86. (Previously Presented) The apparatus of claim 78, wherein said auxiliary controllee electronic apparatus is an apparatus selected from a group consisting of a videocassette

recorder (VCR), a digital versatile disk (DVD) player, a home theatre audio control unit, and a video camera.

87. (Cancelled)

88. (Original) The apparatus of claim 78, wherein said primary controllee electronic device is a TV.

89 (Previously Presented) The apparatus of claim 78, wherein said primary controllee electronic device is a device selected from a group consisting of a set top box, a DVD player, and a VCR player.

90. (Currently Amended) A field extendable remote control apparatus comprising:
first means adapted to receive into the field extendable remote control apparatus,
from a primary controllee electronic device, a first collection of user interface
displays having associated control commands for controlling the primary
controllee electronic device, the first collection of user interface displays
having a plurality of display states and associated display state transition
rules;
second means adapted to facilitate usage of the first collection of user interface
displays by a user to control the primary controllee electronic device; and
third means adapted to send first control commands from the field extendable remote
control apparatus to the primary controllee electronic device to control the
primary controllee electronic device, in response to said usage of the first
collection of user interface displays.

91. – 92. (Cancelled)

93. (Previously Presented) The apparatus of claim 90, wherein the apparatus further
comprises a connection interface adapted to provide a connection selection from a group

consisting of a wireless optical connection operated in accordance with a wireless optical communication protocol, a wireless electro-magnetic connection operated in accordance with a wireless communication protocol, and a wired electrical connection operated in accordance with a wired communication protocol, and said first means is adapted to receive into the apparatus the first collection of user interface displays, from the primary controllee electronic device, through the connection.

94. – 95. (Cancelled)

96. (Previously Presented) The apparatus of claim 90, wherein
said first means is further adapted to receive into the field extendible remote control apparatus a second collection of user interface displays having associated control commands, from the primary controllee electronic device, for controlling an auxiliary controllee electronic device coupled to the primary controllee electronic device;
said second means is further adapted to facilitate usage of the second collection of user interface displays by a user to remotely control the auxiliary controllee electronic device; and
said third means is further adapted to directly or indirectly send second control commands from the field extendible remote control apparatus, to the auxiliary controllee electronic device, to control the auxiliary controllee electronic device, in response to said usage of the second collection of user interface displays.

97. – 98. (Cancelled)

99. (Previously Presented) The apparatus of claim 96, wherein the apparatus further comprises a connection interface adapted to provide a connection selection from a group consisting of a wireless optical connection operated in accordance with a wireless optical communication protocol, a wireless electro-magnetic connection operated in accordance with

a wireless communication protocol, and a wired electrical connection operated in accordance with a wired communication protocol, and said first means is adapted to receive into said field extendible remote control apparatus said second collection of user interface displays from the primary controllee electronic device, through the connection.

100. – 104. (Cancelled)